

REMARKS

The Office Action dated November 18, 2004, has been carefully considered. Claims 1-15 are pending. The above amendments and the following remarks are presented in a sincere attempt to place this Application in condition for allowance. Claims 1, 9, and 11 have been amended in this Response. Reconsideration and allowance are respectfully requested in light of the above amendments and following remarks.

An interview was held with the Examiner, Mr. Quang D. Vu, on December 15, 2004, to discuss the rejections under 35 U.S.C. § 103(a) and the proposed amendments thereto. Applicants wish to thank the Examiner for his time and the courtesies extended.

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) in view of U.S. Patent 6,361,207 to Ferguson ("Ferguson") and U.S. Patent 6,381,286 to Wilkinson et al. ("Wilkinson"). Insofar as these rejections may be applied against the amended claims, they should be deemed overcome.

Claim 1 has been amended to include a distinguishing feature of the present invention. The comparator of Claim 1 is implemented to compare "the output of any one of the plurality of temperature sensors with the output of any other of the plurality of temperature sensors" that reside on the same chip.

The Ferguson and Wilkinson references do not teach, suggest, or disclose this feature of the present invention. Specifically, Ferguson discloses a temperature sensor outside of the chip to compare with the temperature on the chip. Wilkinson discloses sending an output signal when the difference between the voltage of a temperature sensor detecting the operating temperature of a transmitter and a threshold voltage exceeds a specific value.

In contrast with the cited references, the ability of the claimed invention to compare the temperatures of different chip areas on the same chip provides many advantages. For example, if

some chip areas differ in temperature by too much then processing can be distributed to correct this imbalance. The claimed invention is also capable of identifying one or more chip areas of lesser temperature to which processing can be assigned. In contrast the cited references disclose determining only if a chip area is too hot. Temperature differences between chip areas on the same chip can lead to inaccurate results and defective chips. The claimed invention can be implemented to compare the temperature of different chip areas on the same chip, thus allowing management of chip resources in a manner reducing inaccurate results and chip defects, unlike the teachings of Ferguson and Wilkinson, taken either singularly or in combination.

In view of the foregoing, it is apparent that the cited references do not disclose, teach, or suggest the unique combination now recited in amended Claim 1. Applicants therefore submit that amended Claim 1 is both clearly and precisely distinguishable over the cited references in a patentable sense, and is therefore allowable over the cited references in any combination. Accordingly, Applicants respectfully request that the rejection of Claim 1 under 35 U.S.C. § 103(a) in view of Ferguson and Wilkinson be withdrawn and that amended Claim 1 be allowed.

Claims 2-3 depend upon and further limit amended Claim 1. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 2-3 also be withdrawn.

Claim 4 stands rejected under 35 U.S.C. § 103(a) in view of Ferguson, Wilkinson, and U.S. Patent 5,159,520 to Toyooka et al. ("Toyooka"). Insofar as this rejection may be applied against the amended claims, it should be deemed overcome. Claim 4 depends upon and further limits amended Claim 1. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in

condition for allowance. Accordingly, Applicants respectfully request that the rejection of dependent Claim 4 also be withdrawn.

Claims 5-7 stand rejected under 35 U.S.C. § 103(a) in view of Ferguson and Wilkinson. Insofar as these rejections may be applied against the amended claims, they should also be deemed overcome. Claims 5-7 depend upon and further limit amended Claim 1. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 5-7 also be withdrawn.

Claim 8 stands rejected under 35 U.S.C. § 103(a) in view of Ferguson, Wilkinson, and U.S. Patent 6,337,246 to Sobek et al. ("Sobek"). Insofar as this rejection may be applied against the amended claims, it should be deemed overcome. Claim 8 depends upon and further limits amended Claim 1. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejection of dependent Claim 8 also be withdrawn.

Claim 9 stands rejected under 35 U.S.C. § 103(a) in view of Ferguson and U.S. Patent 5,805,403 to Chemla ("Chemla"). Insofar as this rejection may be applied against the amended claims, it should be deemed overcome. Claim 9 has been amended to include a distinguishing feature of the present invention, that a comparator is implemented to compare "the output of any one of the plurality of temperature sensors with the temperature sensor in the simulation area."

The Ferguson and Chemla references do not teach, suggest, or disclose this feature of the present invention. Specifically, Ferguson discloses a temperature sensor outside of the chip to compare with the temperature on the chip. Chemla discloses two chips areas with at least two temperature sensors.

In contrast the ability of the claimed invention to compare temperatures of different chip areas to a simulation area on the same chip provides many advantages. For example, if some chip areas differ in temperature by too much then processing can be distributed to correct this imbalance. The claimed invention is also capable of identifying one or more chip areas of lesser temperature to which processing can be assigned. Temperature differences between chip areas on the same chip can lead to inaccurate results and defective chips. The claimed invention can be implemented to compare the temperatures of a plurality of chip areas to a simulation area, thus allowing better management of chip resources, unlike the teachings of Ferguson and Chemla, taken either singularly or in combination.

In view of the foregoing, it is apparent that the cited references do not disclose, teach, or suggest the unique combination now recited in amended Claim 9. Applicants therefore submit that amended Claim 9 is both clearly and precisely distinguishable over the cited references in a patentable sense, and is therefore allowable over the cited references in any combination. Accordingly, Applicants respectfully request that the rejection of Claim 9 under 35 U.S.C. § 103(a) in view of Ferguson and Chemla be withdrawn and that amended Claim 9 be allowed.

Claim 10 stands rejected under 35 U.S.C. § 103(a) in view of Ferguson, Chemla, and Sobek. Insofar as this rejection may be applied against the amended claims, it should be deemed overcome. Claim 10 depends upon and further limits amended Claim 9. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejection of dependent Claim 10 also be withdrawn.

Claims 11-12 stand rejected under 35 U.S.C. § 103(a) in view of Ferguson and Chemla. Insofar as these rejections may be applied against the amended claims, they should be deemed overcome. Claims 11-12 depend upon and further limit amended Claim 9. Hence, for at least the

aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 11-12 also be withdrawn.

Claim 13 stands rejected under 35 U.S.C. § 103(a) in view of Ferguson, Chemla, and Toyooka. Insofar as this rejection may be applied against the amended claims, it should be deemed overcome. Claim 13 depends upon and further limits amended Claim 9. Hence, for at least the aforementioned reasons, this Claim should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejection of dependent Claim 13 also be withdrawn.

Claims 14-15 stand rejected under 35 U.S.C. § 103(a) in view of Ferguson and Chemla. Insofar as these rejections may be applied against the amended claims, they should be deemed overcome. Claims 14-15 depend upon and further limit amended Claim 9. Hence, for at least the aforementioned reasons, these Claims should be deemed to be in condition for allowance. Accordingly, Applicants respectfully request that the rejections of dependent Claims 14-15 also be withdrawn.

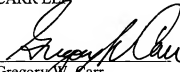
Applicants have now made an earnest attempt to place this Application in condition for allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request full allowance of Claims 1-15.

Applicants do not believe that any fees are due; however, in the event that any fees are due, the Commissioner is hereby authorized to charge any required fees due (other than issue fees), and to credit any overpayment made, in connection with the filing of this paper to Deposit Account No. 50-0605 of CARR LLP.

Should the Examiner deem that any further amendment is desirable to place this application in condition for allowance, the Examiner is invited to telephone the undersigned at the number listed below.

Respectfully submitted,

CARR LLP


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